MARINE REVIEW.

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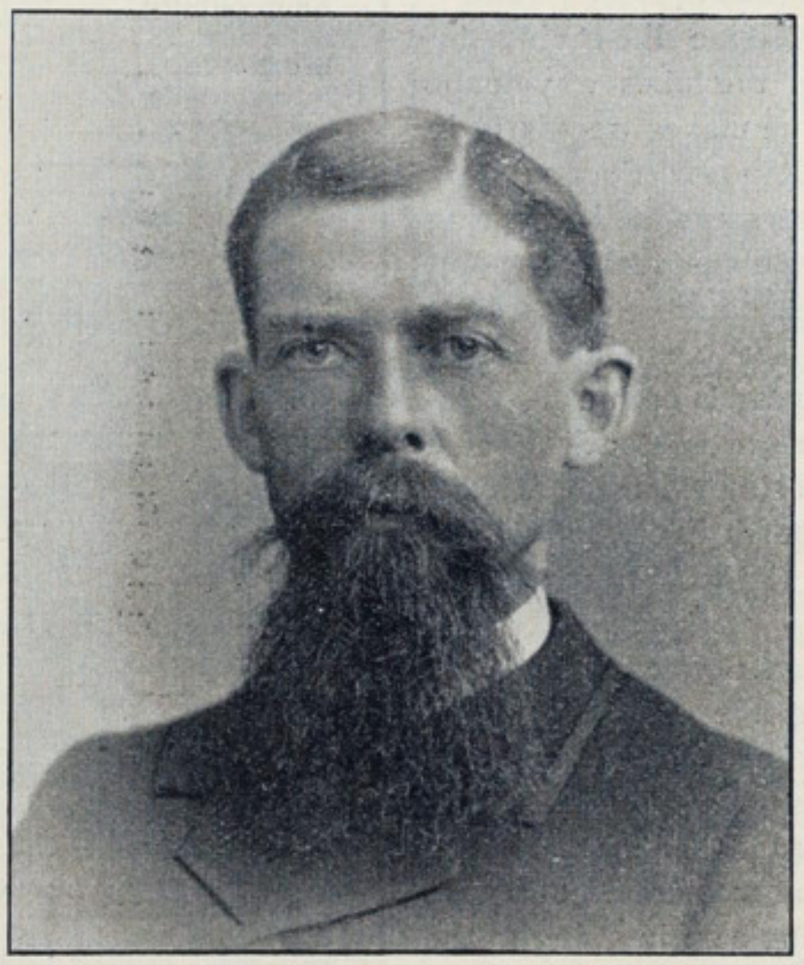
Steamer Samuel Mitchell.

Through the launch of another big steel steamer for the iron ore trade at the yard of the Globe Iron Works Company, Cleveland, last week, Samuel Mitchell of Negaunee, Mich., is introduced to lake vessel owners as a managing owner of a very valuable piece of floating property. The boat is named for her managing owner and is a fine specimen of naval architecture. Samuel Mitchell, whose portrait is presented herewith, is among the most successful mine managers in the Lake Superior region. He has been closely identified with Mr. William Chisholm of the Cleveland Rolling Mill Company in the Jackson, Section 33 and other mining companies.

This steamer is the Globe company's No. 47 and is 292½ feet long, 308½ feet over all, 40 feet beam and 24½ feet depth, with a water bottom 4½ feet deep. She is expected to carry 3,000 tons on 16 feet draft. Her coefficient of fineness is 79, being the same as the Republic. Her engines are 20, 32 and 52 by 42 inches stroke and the boilers are 14 by 12½ feet, each having three 46-inch furnaces. The wheel is 12 feet 8 inches in diameter and has 15 feet lead. Her graceful run aft gives her an appearance denoting greater fineness than she really has. Probably no vessel built this season embodies more practical features in the texas and cabins than the Mitchell. She was built under the sole supervision of Capt. Thomas Wilford, who gave attention to such detail as having the sofa and desk on the after side so that when she is up at the head the captain will not have to lash himself to the desk if he wants to do any writing. The chart table has drawers and does not fold up. The railing around the pilot house is wood instead of iron and makes a neat effect. The top of the pilot house has bulwarks and stanchions that are about 10 feet high. In pleasant weather an awning will cover the top and when it is stormy the stanchions will hold up a canvas protector above the bulwarks. The cabins are finished in cherry and sycamore and the furnishing will be unusually fine. There will be two separate dining rooms, one being reserved for owners and their friends, and the other is for the crew.



SAMUEL MITCHELL.

Lake Freight Situation.

As a result of an opening of navigation fully three weeks ahead of what had been expected, vessels have been offered to ore shippers within the past few days at 75 cents for first trips from Escanaba and the coal forwarding companies of Buffalo and Cleveland find an abundance of tonnage pressing the market for cargoes 25 per cent. lower than anything that would be considered in March. The explanation is simple. In no branch of the lake trade were shippers ready for so early an opening of navigation. Only a very small portion of the ore to come from Escanaba has been sold, and the docks at that point, notwithstanding the movement of grain from Chicago, will not be ready for boats, no matter at what price they might be secured, until next week. Only a few days have intervened since the shippers of soft coal agreed on prices and they have not had time to make sales or prepare for the accumulation of more than a very scant supply of the coal at shipping ports, while the dealers in hard coal at Buffalo are forced to delay shipments to Milwaukee and Chicago on account of the assessment of taxes previous to May 1, and from other causes.

The vessel owners have received a severe setback in this unexpected turn of affairs, however, and with a big fleet bound down the lakes the indications are against any strengthening of rates on coal during the early part of the season when owners are most desirous of carrying up loads. It was from these cargoes bound up the lakes that most assistance was expected in strengthening the market and this can not come until the fleet is scattered. The hope of a return of activity in the iron market, through which additional sales of ore might be secured, has dragged into the opening of the season with conditions as regards most of the iron ore output practically the same as they were at this time a year ago when the situation was most discouraging. Some relief is found now in the large block of tonnage contracted at $1.25 for the Two Harbors and Ashland trades and a marked reduction in stocks of ore on Lake Erie docks, but the prospective grain movement can not uphold paying rates for the large proportion of "wild" tonnage unless additional sales of ore are made to increase the demand for carriers. A scattering of the fleet or delays from the numerous labor troubles reported in all parts of the lakes may improve matters, but the outlook at the present time is certainly very discouraging. The latest rates quoted on a few boats that have obtained soft coal cargoes are on the basis of 45 cents to the head of Lake Superior, 50 cents to Milwaukee and Chicago and 40 cents to Escanaba.

Aids to Lake Navigation.

Mr. Brickner, of the House committee on commerce, has substituted for the Taylor bill, providing for fog signals, light-houses, etc., an omnibus measure including coast as well as lake aids of this nature. The bill, which includes most of the light-houses and fog signals recommended by the light-house board for the lakes, has been reported favorably to the House and will come up for consideratian shortly, when the commerce committee will have a day set aside for its business. The appropriation committee of the House is, of course, strongly opposed to even fair expenditures in any department of the government, but the vessel owners still entertain hope of an appropriation for this bill.

Lake Exhibit at the World's Fair.

Lieut. Baker, U. S. N., who has been placed in charge of the marine section of the transportation department of the World's Columbian Exposition, is making some effort to secure a lake exhibit at the fair. A letter submited to the Cleveland Vessel Owners' Association at a special meeting this week asked especially that interest be taken in the preparation of an historical display. Action was deferred on account of the metting having been called for a special purpose. A report from the transportation department says that the Detroit Dry Dock Company is preparing to send a perfect model of its entire plant, both at the Detroit and Wyandotte yards. The exhibit will also include models of some of their manufactured products like the St. Ignace, which for several years has been making regular trips across the Straits of Mackinac, winter and summer, and is pronounced to be the most powerful boat of its kind in the world.

The Bethlehem Steel Company of South Bethlehem, Pa., will make a grand exhibit of big forgings and various naval appliances. The company will also erect a full-size model of its famous 125-ton steam hammer, said to be the largest in the world. It will be to all appearances a perfect duplicate in every respect.

Escanaba and Racine Harbors.

Capt. George Breckenfeld, keeper of Racine life-saving station, renders the coal handling interests of the lakes a valuabe service in the accurate soundings which he makes regularly in the harbor at that point. He sends the REVIEW a copy of a chart made from soundings taken a few days ago and covering the harbor entrance from the Goodrich steamboat dock to a point some distance beyond the pier ends. The soundings were taken every 50 feet east and west and every 20 feet north and south, across the river. The chart shows that vessels bound for Racine should not load deeper that 13 feet, as the water is about a foot lower than it was last year. In entering the harbor, masters will do well to keep in range of the north pier, taking the center of the channel within the piers all the way up to the coal dock.

The Chicago & Northwestern Railway Company has been repairing its coal dock at Escanaba during the winter and the work of dredging out the sand that has been made in front of the dock has just been begun, but will be pushed to completion as rapidly as possible. Quite a large sand bar has formed between No. 1 dock and the coal dock and masters of steamers laden with coal will do well to exercise due care in going to the coal dock. The tugs will, of course, look after the schooners while being towed to the dock.

Canada's Merchant Marine.

The twenty-fourth annual report of Canada's department of marine, just istued, shows that the total number of vessels remaining on the registry books of the Dominion on Dec. 31, 1891, including old and new vessels, sailing vessels, steamers and barges was 7,015, measuring 1,005,475 tons, register tonnage, being an increase of twenty-four vessels, and a decrease of 19,499 tons register as compared with 1890. Tne number of steamers on the registry books on the same date was 1,433 with a gross tonnage of 221,679 tons. Assuming the average value to be $30 per ton, the value of the registered tonnage of Canada, on Dec. 31 last, would be $30,164,250, a decrease of $574,970 as compared with the valuation on the corresponding date a year previous.

The number of new vessels built and registered in the Dominion during the year was 312, measuring 52,145 tons, register tonnage. Estimating the value of the new tonnage at $45 per ton, it gives a total value of $2,346,525 for new vessels.

In 1873 Canada had 6,783 vessels of 1,073,718 tons, and in all the years since that time the vessel property owned in the country has not at any time varied 300,000 tons.

The tonnage of the Dominion is divided among the different provinces as follows:

	Number of vessels.	Number of steamers.	Gross tonnage of steamers.	Total Registered Tonnage.
New Brunswick	969	97	8,913	193,193
Nova Scotia	2,778	118	13,992	461,758
Quebec	1,404	267	74,132	162,330
Ontario	1,345	741	92,785	138,914
Prince Edward Island	195	17	4,555	23,316
Manitoba	78	51	5,762	6,197
British Columbia	246	142	21,540	19,767
Total	7,015	1,433	221,679	1,005,475

Tonnage registered in the different ports of Ontario and Quebec, where most of the lake vessels are owned, is shown in the following tables:

ONTARIO PORTS.	Number of vessels.	Number of steamers.	Gross tonnage of steamers.	Total Registered Tonnage.
Amherstburg	3			148
Belleville	14	7	499	862
Brockville	31	28	766	839
Bowmanville	3			425
Collingwood	46	44	5,021	3,878
Chippewa	3	2	263	153
Cramaha	2			278
Chatham	27	16	1,103	1,663
Cobourg	6	2	51	472
Cornwall	3	2	178	214
Dunville	9	5	636	1,027
Deseronto	7	5	785	784
Goderich	39	20	867	1,998
Hamilton	47	32	7,700	6,910
Kingston	206	76	12,505	26,090
Morrisburg	3	1	55	382
Napanee	8	3	302	922
Owen Sound	32	29	4,833	3,379
Ottawa	196	100	12,143	20,529
Oakville	4			323
Prescott	28	14	627	3,753
Port Burwell	15	6	167	1,411
Port Arthur	6	6	382	259
Port Dover	17	4	131	1,112
Port Colborne	5	2	95	597
Port Hope	64	38	3,031	5,788
Port Rowan	7	1	168	895
Port Stanley	11	9	1,864	1,482
Pictou	30	9	450	2,779
Sarnia	24	17	7,856	6,295
Ste. Marie	15	13	538	590
St. Catharines	123	54	9,127	19,895
Saugeen	7	7	407	277
Toronto	211	142	13,057	14,533
Wallaceburg	39	21	1,458	2,506
Windsor	54	26	5,720	5,466
Whitby				
Total	1,345	731	92,785	138,914
QUEBEC PORTS.				
Amherst, M. I.	30			1,098
Gaspe	40	1	709	2,490
Montreal	451	139	51,645	78,489
New Carlisle	16	3	49	800
Perce	2			133
Quebec	865	124	21,729	79,320
Total	1,404	267	74,132	162,330

The United States courts have held that a vessel can not be held for injury to cables in navigable waterways. A short time ago an ocean-going steamship in leaving her dock at Jersey City plowed up the soft bottom with her propeller, which on coming in contact with a dozen or more sub-marine cables tore them asunder. A decision in a suit at law that followed was in favor of the vessel, on the ground that a harbor is to be kept free for navigation.

Iron Mining.

VALUE OF LEADING STOCKS.

Quoted by Chas. H. Potter & Co., No. 104 Superior St. Cleveland, O.

Stocks.	Par Value.	Bid.	Asked.
Cleveland-Cliffs Iron Company	$100 00	$.....	$ 75 00
Champion Iron Company	25 00	.....	65 00
Chandler Iron Company	25 00	45 00	46 00
Jackson Iron Company	25 00	.....	100 00
Lake Superior Iron Company	25 00	.....	50 00
Minnesota Iron Company	100 00	.....	80 00
Pittsburg Lake Angeline Iron Co	25 00	150 00	160 00
Republic Iron Company	25 00	.....	21 00
Ashland	25 00	.....	46 00
Section Thirty-three	25 00	.....	7 00
Brotherton	25 00	.....	2 50
Iron Belt	25 00	2 15	.....

Quotations on mining stocks are again reduced in all cases and most of them are nominal, as there is actually no market for these securities at anything near prices that might induce holders to sell. It is expected that the Chandler company will on the first of the coming month pay the third of its 60-day dividends for this year, but outside of this there is little talk of any sharing of surplus money held by the big companies. Nothing is said officially about the first quarterly instalment of the Iron-Cliffs company's 6 per cent. annual dividend, which was expected on the 1st inst.

A feature in the general progress toward the best business methods in all branches of the Lake Superior iron ore trade is the care and detail attending analyses of the product of all mines. Not many years ago ore was sold on the general knowledge of its quality without a guarantee of any kind. The furnace companies had no chemists, and when they complained at the end of the season of any portion of the ore being dirty they were probably promised that a little more care would be used in the removal of rock or other defects in future purchases. Now the ore is in most cases analyzed at the mine, a cargo analysis is made at the port of delivery and it is again passed upon by the chemists at the furnaces. In every case a most careful system of sampling is followed, and average analyses for the season, requiring a vast amount of clerical work, are made. In addition to this, the ore is sold largely on a guarantee that provides for a penalty when the analysis shows less than the figures agreed upon as to iron and phosphorus, or a premium when the average is above the guarantee.

Favorable weather has caused an active renewal of work on the new Mesaba & Northern Railway and two stock exchanges, one in Duluth and the other in Minneapolis, organized for the purpose of dealing in the stocks of the hundreds of companies incorpotated in the state recently, have been opened, but it is evident that the boom has reached its limit. The Duluth & Iron Range Railway has not as yet let the contract on the branch for which surveys were made some time ago.

Mr. M. A. Bradley and other Cleveland parties own a control of the Sheridan mine, Vermillion range, where diamond drill operations, which have been carried on for some time past, give very favorable promise of a paying body of ore. It will be necessary to build only five or six miles of railway to reach the property, and if the diamond drill work proves satisfactory there will be little delay in bringing the mine into the shipping list.

The Commonwealth Mining Company has sold 169,000 tons of Badger ore for this season's delivery by lake and shipments to Escanaba have begun, the cars loaded directly from the mine. Five car loads of Badger ore are also being shipped daily to Chicago by rail. The company has between 40,000 and 50,000 tons of ore in stock at the Badger and Commonwealth mines.—Florence Mining News.

The Volunteer mine, Marquettte range, has a large amount of ore in stock and no sales. The working force of the mine is being largely reduced.

Capt. Edward Blake, at one time superintendent of the Jackson mine, is on the Mesaba superintending explorations for West Virginia parties.

Send 20 cents in stamps for Tabulated Statement showing Lake Superior ore production for 1891, and the past 36 years.

CHICAGO LAKE INTERESTS.

WESTERN OFFICE, MARINE REVIEW,
No. 210 So. Water Street, CHICAGO, Ill., Apr. 14.

By the time the MARINE REVIEW reaches here the contracts for World's Fair transportation will undoubtedly have been signed. Reports from Lake Superior say that McDougall has draughtsmen at work on plans for a monster whaleback, which he intends building for this traffic. It is understood, that he has a bid before the World's Fair committee,and if the contract is awarded him, two passenger "pigs" will be constructed this season. J. C. Amendt,who offered to give the World's Fair 60 per cent. of the gross receipts at the former bidding, dropped out this time. It was a downright crazy bid at best,and would never have been made by anyone who knew a three-masted schooner from a mud scow. It was this bid only which prevented the contract from being let a month ago. When the committee demanded that a certified check for $35,000 be put up as an evidence of good faith Mr. Amendt dropped by the wayside.

Partridge's exploits in the wheat pit have caused many vesselmen and shippers who do business on the board of trade to favor the passage of the Hatch bill or some other legislation for the stoppage of reckless speculation of grain. With the elevators in Chicago well filled with wheat, there is so such monkey business with the markets that no one knows one day what he is going to do the next day in handling wheat. Many think that had it not been for Partridge the grain would have gone forward more freely and the collapse would not have occured. As it is, the shippers have the vesselmen on the run and have made their own rates for a week. The outlook is gloomy indeed, compared to what it was a month ago. Then marine men here were confident. Now they are downcast, and are in a position to be forced to accept the demands of the shippers, both in grain and lumber. If there ever is to be an improvement it ought to come this year. With Chicago growing at a wonderful rate to prepare for the World's Fair, the consumption of lumber will be heavy, and if the lumber carriers can not succeed in making money this year it will be a long while before they do, for Chicago is discounting her legitimate growth for five years in the present feverish energy to make all possible during the fair.

The old question as to whether boats can clear from Chicago direct to iron ore ports when they intend to stop at Escanaba for ore is already up,the customs officials refusing to make such a clearance. As a matters of law and of fact the customs officials may get into a box if they absolutely refuse such a clearance and the boats sail without papers in consequence. The rule is a good one in that it gives the intermediate points proper credit for their commerce, but it does seem as if the United States government could obtain statistics in an easier and better way than that of requiring captains to report at all intermediate points. It is only for the purpose of gathering statistics that these coastwise traders are compelled to report at all. There is really as little sense in requiring a boat tradeing across Lake Michigan to report and clear every time she enters and leaves port as it would be to make the same requirement of the conductor on a freight train. In time captains will send records of every trip directly to the treasury department. There, competent clerks will compile the business of each port and at the close of the season reliable statistics can be issued. It would be a much easier way, much more accurate and less expensive than the present system. The REVIEW deserves the credit for proposing this plan. Its only fault was in not pushing it harder in order to secure Congressional action in place of Senater Vilas' measure.

There was never an opening of navigation like this. It caught everybody in Chicago unprepared. The tugmen did not have their boats ready by several days, vessel agents found a big fleet had to be chartered right away, and there has been a general mix for a week. Right at the outset the labor troubles began, and the lake and rail lines got into their yearly war over rates. All these things should have been scattered through the season, but here they all came within three days, and apparently they are all here to stay.

Official Numbers and Tonnage.

The bureau of navigation assigned official numbers to the following lake vessels during the week ending April 9: Steam—Samuel Mather, Buffalo, 1,713 tons gross, 1,318 39 net, No. 116,484; Thomas Wilson, Buffalo, 1,713 tons gross, 1,318.39 net, No. 145,616; James B. Colgate, Buffalo, 1,713 tons gross, 1,318.39 net, No. 77,019; John J. Hill, Port Huron, 974.33 tons gross, 786.60 net, No. 77,020; Ruth, La Crosse, 60.93 tons gross, 60 93 net, No. 110,967; Golden, Milwaukee, 44.18 tons gross, 22.09 net, No. 86,194; Grace, Buffalo, 13.99 tons gross, 7.00 net, No. 86,192.

As noted in a list of appointments printed elsewhere, the names of the three new steamers building by the American Steel Barge Company on its own account will be Thomas Wilson, Samuel Mather and James Colgate. These new boats will give this company a fleet of eighteen barges in the lake trade this season.

Marine Relics at the National Museum.

Special Correspondence to the MARINE REVIEW.

WASHINGTON, D. C., April 15.—Every reader of the MARINE REVIEW, when he visits Washington, should not fail to visit the National Museum and see the department devoted to boats. Nowhere in the country can one obtain so good an idea of marine carriers as here. The various evolutions through which boats have passed are here shown in interesting object lessons. There are boats of bark, boats made out of skins of animals, with bone and bamboo ribs ; there are dugouts, smooth bottomed, clinker built, flat, sharp, and perfectly round boats that resemble tubs. There is a flat-bottomed Mississippi steamboat, made familiar to most readers by Mark Twain, with its fancy ginger-bread work, which looks for the world like a floating house.

In striking contrast are the full-rigged and polished ocean ships and yachts and beautiful models of war ships. A bust of Robert Fulton commands the respectful attention of all visitors, and near it is an object of interest to all engineers. Here, with a coat of black paint on it, to check the tooth of time, which has gnawed it almost through, is a tubular boiler, patented by John Stevens, in the United States, in 1803, and in England in 1805.

In his English patent specification, Mr. Stevens begining with "Whereas, His most Excellent Majesty King George the Third, by his letters patent, bearing date at Westminster, the thirty-first day of May, in the forty-fifth year of his reign," says, further on : "In the boiler I am about to describe, I apprehend the improvement is carried to the utmost extent of which the principle is capable." In describing, he continues: "Suppose a plate of brass of one foot square, in which a number of holes are perforated ; into each of which holes is fixed one end of a copper tube of about an inch diameter and two feet long, and the other end of this tube inserted in like manner into a similar piece of brass, the tubes, to insure their tightness, to be cast in the plates. These plates are to be enclosed at each end of the pipes by a strong cap of cast iron or brass, so as to leave a space of an inch or two between the plates or ends of the pipes and the cast iron cap at each end ; the caps at each end are are to be fastened by screw-bolts passing through them into the plates. The necessary supply of water is to be injected by means of a forcing pump into the cap at one end and through a tube inserted into the cap at the other end, the steam is to be conveyed to the cylinder of the steam engine; the whole is then to be encircled by brickwork or masonry in the usual manner, horizontally or perpendicularly." The first patents in America were to Reade, Fitch, Rumsey and Stevens, in August, 1791. Reade's was for a portable furnace tubular boiler ; Fitch's was for driving a vessel by water in at the bow and forcing it out at the stern. The principle of Rumsey's and Stevens' patents was much the same as Fitch's.

A graceful action in recognition of an inventor was performed by the Senate recently. In the midst of an animated debate on an important measure, Senator Hoar asked unanimous consent that Dr. Joseph Francis be admitted to the floor of the Senate. He spoke of the old gentleman as one who had received the thanks of Congress as the inventor of the life-saving car, as being ninety-one years old, and as having marched in 1812 with a company to the defence of the sea-coast, he being then a lad of twelve years. Unanimous consent being given, Senator Hoar stepped to one of the doors and immediately reappeared in company with Dr. Francis.

Effect of Canada's Canal Laws.

Special Correspondence to the MARINE REVIEW.

KINGSTON, ONT., April 15.—Immediately after it was announced that the government had decided to allow the rebate on grain transhipped at Ogdensburg the Montreal Transportation Company, whose members used all their influence in bringing about the result, concluded to lay the keel of a new 50,000 bushel barge for lake service. Work will be begun as soon as the necessary timber is secured. It is understood that Mr. Blaine's refusal to negotiate a treaty with Canada except from an American standpoint had considerable to do with the government's decision. It is beyond a doubt, however, that the reciprocity in wrecking bill will pass, as to have reciprocity in that respect requires no new legislation by the United States. Such a bill has been on its statute books for ten years, and it will be signed by the president and become a law just as soon as the Canadian bill is passed.

Men are now at work erecting range lights in the harbor. This will be good news for mariners, as many captains did not like to come here fearing the shoals. Cautious ones lay outside all night and will only attempt an entrance in daylight. The government has also granted another installment towards removing the shoals in the harbor and work will be begun as soon as possible.

The new steamer North King, which plies between Port Hope and Charlotte, had several changes made on her during the winter. She will be faster than ever and her interior much finer than last year. She will be commanded by Capt. H. Nicholson, an experienced mariner.

The new $150,000 steamer being built at New York for the Mail Line is about finished. N. Connolly, one of the directors of the company, is now in that city seeing the finishing touches put on. She is said to be magnificent. The mail steamers will not start until May.

Since the talk about excluding alien sailors from American vessels has been revived, many sailors who find employment on American bottoms have resurrected old naturalization papers, which they intend carrying about with them during the season. In fact, cases have come under the notice of the American consul in which sailors have in their possession the naturilization papers of both countries. These therefore will have no difficulty in evading any law.

It is intimated that the government may hold an investigation into the manner in which the Galops rapid channel was deepened at a cost of hundreds of thousands of dollars. It is claimed that the contract called for 17 feet of water. Such a depth is not there. Not long since a tug drawing 6 feet struck heavily. The engineers, without a doubt, should be asked to report. Nine feet of water existed before the the work was begun.

Appointments of Masters and Engineers.

AMERICAN STEEL BARGE COMPANY, WEST SUPERIOR, WIS.: Steamers—Colgate Hoyt, Capt. W. H. Kelly, Engineer Gilbert Newton. A. D. Thomson, Capt. A. P. Chambers, Engineer Earnest Sampson; E. B. Bartlett, Capt. S. P. Goodale, Engineer Albert Edgar; Thomas Wilson, Capt. John McArthur, Engineer J. E. McSweeny; Samuel Mather, Capt. J. H. Smith, Engineer Brown; James B. Colgate, Capt. W. W. Smith, Engineer R. S. Blauvelt. Barges—101, Capt. B. S. Jones; 102, Capt. E. Peabody; 103, Capt. R. W. Hayes; 104, Capt. Thomas A. Green; 105, Capt. James Barr; 107, Capt. William S. Hoag; 109, Capt. John Gillies; 111, Capt. E. Emanuelson; 115, Capt. Thomas Tobin; 116, Capt. Gus E. Atkinson; 117, Capt. Wilber Holdridge; 118, Capt. James Leahy.

WESTERN TRANSIT COMPANY, BUFFALO, N. Y.: Steamers—Albany, Capt. A. J. McDonald, Engineer M. J. Laney; Arabia, Capt. Patrick Shea, Engineer Patrick Welch; Badger State, Capt. James Kennedy, Engineer J. W. Brooks; Boston, Capt. Donald Gillies, Engineer S. B. Muirhead; Buffalo, Capt. Dugald Buie, Engineer William McNulty; Chicago, Capt. F. J. McCabe, Engineer F. A. Miller; Commodore, Capt. R. D. Gardner, Engineer Moses Trouton; Empire State, Capt. John Cassin, Engineer George Hale; Harlem, Capt. Frank Williams, Engineer J. N. Gregory; Hudson, Valentine Jones, Engineer Henry Hess; Idaho, Capt. G. W. Bryce, Engineer James Anderson; McCormick, (steam lighter at Chicago), Capt. M. A. Huntley, Engineer L. F. Monroe; Milwaukee, Capt. Michael Folan, Engineer L. G. Gebhard; Montana, Capt. Alva Shaver, Engineer William Tibby; Syracuse, Capt. J. H. Dissett, Engineer G. W. Phillipe; Vanderbilt, Capt. Robert Murray, Engineer Fred Hale.

LEHIGH VALLEY TRANSPORTATION COMPANY, BUFFALO, N. Y.: (Appointments unofficial.) Steamers — Saranac, Capt. J. M. Todd ; Tuscarora, Capt. John Johnson; E. P. Wilbur, Capt. J. A. Brown; Tacoma, Capt. James Todd ; Oceanica, Capt. W. A. Ashley ; H. E. Packer, Capt. William Williams ; Fred. Mercer, Capt. T. Rahill; Seneca, Capt. Thomas Burton ; R. A. Packer, Capt. A. J. Talbott ; Cayuga, Capt. P. Riley.

VANDALIA RAILWAY LINE, WEST BAY CITY, MICH.: Steamers—Soo City, Capt. Bryon Armstrong, Engineer Thomas Reese ; Minnie M., Capt. James Mondon, Engineer Adolph LaFranier ; Lora, Capt. M. J. Driscoll, Engineer M. King ; Ossifrage, Capt. A. G. Aldrich, Engineer Louis Gelinas.

GRUMMOND'S MACKINAC LINE, DETROIT, MICH.: Steamers—Depere, Capt. Thomas Meikleham, Engineer John Bloom; Flora, Capt. K. Finlayson, Engineer William Campbell; Atlantic, Capt. J. R. Jones, Engineer John Johnson.

Appointment of Local Inspectors.

In the Senate a few days ago there was presented a letter from Secretary Foster, entitled Senate executive document No. 71, on the subject of appointments of local inspectors of steam vessels. The letter carries with it a copy of a bill, which failed of passage in the last Congress, providing for the appointment of local inspectors by the supervising inspector of the district, instead of a board made up of the supervising inspector, district judge and collector of customs. The secretary recommends the passage of the bill on the claim that when vacancies occur in the local boards the district judge as a rule declines or fails to take part in the appointment, the result of which is often a disagreement as to candidates between the supervising inspector and the collector. It will make little difference to the shipping interests whether this bill is passed or not, as in any event the appointments will be controlled, as they are now in most cases, by Congressmen or Senators. There is a disposition to be rid of politics in the steamboat inspection serviee, however, and some day the politicians will hear from a powerful lake influence on the subject.

Correct Figures on the Lake Movement of Soft Coal.

A correct statement of the lake movement of soft coal during the season of 1891 has been a long time coming but it is here presented by ports in full and a comparison is made with the shipments of 1890. As in the case of all articles of lake commerce, present laws governing the movement of vessels do not admit of a correct report of coal shipments being secured through collectors of customs, but these figures were prepared by the Pittsburgh Coal Shippers' Association from reports furnished by all railways engaged in the lake trade. Shipments from all ports were 44,940 tons in excess of those of 1890. An important feature in the statement, which follows, is the lake shipments from West Virgina mines:

LAKE ERIE PORTS.	Ohio Coal, 1891.	Pennsylvania Coal, 1891.	West Va., Coal, 1891.	Total, 1891.	Total, 1890.
Erie	.....	89,310	.....	89,310	129,304
Ashtabula	.....	386,375	.....	386,375	452,394
Fairport	.....	66,914	.....	66,914	63,360
Cleveland	290,585	601,902	124,000	1,016,487	922,536
Lorain	253,539	8,447	26,825	288,811	227,181
Huron	200,000	.....	.....	200,000	150,000
Sandusky	157,571	.....	.....	157,571	271,540
Toledo	947,288	.....	.....	947,288	891,501
	1,848,983	1,152,948	150,825	3,152,756	3,107,816

Grain at Chicago and Duluth.

Following is a statement of wheat stocks at Duluth on Monday, the 11th inst:

	Bushels.
In store	13,430,651
Afloat	400,703
Increase last week	1,202,320
Excess over same time last year	8,614,948

Stocks of grain at Chicago have been increasing in about the same proportion as that noted at Duluth, but manipulation of the market by speculators has caused an unsettled feeling among buyers.

The River and Harbor Bill.

All reports from Washington regarding the river and harbor bill are to the effect that it will in all probability be called up in a few days and will be passed, carrying practically all of the appropriations which it contained when reported from committee on Saturday last. When this bill reaches the Senate a number of amendments of interest to the lakes will undoubtedly be proposed, and some of them may be included in the bill on its final passage. With this bill, as in the case of the river and harbor bill passed by the last Congress, the REVIEW has had nothing to say in favor of or against any of the single items in which the vessel owners of different lake ports are especially interested. With a view to representing all lake interests in a fair way, progress on the bill has been commented upon only in a general way or with reference to the 20-foot channel appropriation and similar items deserving of the strongest support from all branches of the lake trade. We feel called upon now, however, on account of a misunderstanding that may have had some influence in the house committee, to call attention to one item in the bill, that of $70,000 for widening and extension of the piers and other improvements at Ashtabula Harbor, Lake Erie. For this work the government engineers recommended an appropriation of $315,000, notwithstanding that the bill in its present form carries but $70,000. For a year or more past a great deal of talk, much of it of an idle nature, has been indulged in about a loss of lake commerce to Cleveland, through a portion of the iron ore trade being diverted to Ashtabula, Fairport, Lorain and othet Ohio ports. While it is the duty, of course, of Cleveland citizens to retain for this port as much as possible the bulk of this trade, it is most unfortunate that this spirit of rivalry has been carried so far by newspapers and people outside of the vessel interests as to result in depriving Ashtabula of what is rightfully due to the port for improvements. It is not necessary to call to the attention of vessel owners and shippers of ore and coal who understand this subject the necessity of treating all important harbors alike for the general welfare. Iron ore and coal passing in and out of Ashtabula, as well as other ports at which a similar business is carried on, is controlled in Cleveland, the vessels are owned and managed largely in Cleveland and natural causes governing railway connections and harbor and dock facilities must stand in the way of all this vast commerce being carried on at a single port. It is not necessary to go into detail regarding the importance of the port of Ashtabula, which holds the first place among ore receiving ports on the lakes, to convince those who are most interested in the river and harbor bill that this appropriation is insufficient for the requirements at that port, and an increase of it in the Senate should be favored by every lake member of Congress. Improvements in iron ore and coal docks made at Ashtabula within the past two years by private enterprise are greater than at all other Lake Erie ports combined and this progress should not pe overlooked by the vessel interests.

Insurance Matters.

The English underwriters, who have been taking risks on steel vessels of the lakes for two or three seasons past, will undoubtedly follow the lake underwriters this season in the new rule regarding the adjustment of general average claims on river strandings, as the policy of the foreigners provides that such adjustments are to be made in accordance with the rules governing the business of lake underwriters.

Hull insurance on most of the lake vessels has been placed, and as far as can be learned there has been no cutting of rates. Shippers of iron ore and coal have profited by the competition for hull business, however, as the underwriters have resorted to the practice of past seasons, that of covering ore and coal in blanket policies at very low figures in order to secure the hull business of sub-agencies. In some cases coal has been covered as low as 15 to 17 cents to Lake Michigan and Lake Superior and ore at 13½ and 14 cents. Some of the underwriters say that an effort will be made next year to establish cargo rates and overcome this kind of competition. There is certainly no money in the iron ore and coal cargo business at present rates.

Possession of Government Piers by Corporations.

In Congressman Durborow the vessel interests of Chicago have an able advocate. In the House on Monday he secured the passage of a bill anulling a resolution of the last Congress by which the secretary of war was given power to lease one of the piers, and then clinched the measure by tabling a motion to reconsider the vote by which the bill was passed. One of the Chicago railway companies sought possession of the pier to the detriment of the lake shipping interests.

It is again announced from Washington that the war department will take forcible possession of the north pier at Buffalo, occupied by the Delaware, Lackawanna & Western Railway Company for coal shipping purposes. The United States district attorney at Buffalo long ago recommended such a course and now the attorney general sanctions the opinion of the district officer. The United States has possession of the pier, of course, as the railway company now has but a lease of the property, granted three years ago by the government. In view of the claim of an old title held out by the railway company in its long fight for the pier, the attorney general agrees with the vessel owners, who have opposed the granting of rights of this kind to private corporations, that the proper course is to dispossess the railway company and leave the burden of proof to establish title with its managers.

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MARINE REVIEW.

DEVOTED TO THE LAKE MARINE AND KINDRED INTERESTS.

JOHN M. MULROONEY, ... } PROPRIETORS.
F. M. BARTON, ... }
HOMER J. CARR, - - - Associate Editor and Manager Chicago Office, 210 South Water Street.

Published every Thursday at No. 516 Perry-Payne Building, Cleveland, O.

SUBSCRIPTION—$2.00 per year in advance. Convenient binders sent, post paid, 75 cents. Advertising rates on application.

The books of the United States treasury department contain the names of 3,600 vessels, measuring 1,154,870.38 tons in the lake trade. In classification of this fleet the lakes have more steamboats of 1,000 to 2,500 tons than the combined ownership of this class of vessels in all other sections of the country. The number of vessels of 1,000 to 2,500 tons on the lakes on June 30, 1891, was 310 and their aggregate gross tonnage 512,787.58; in all other parts of the country the number of this class of vessels was, on the same date, 213 and their gross tonnage 319,750 84. The classification of the entire lake fleet is as follows:

Class.	Number.	Tonnage.
Steam vessels	1,592	756,751.53
Sailing vessels	1,243	325,131.06
Canal boats	703	72,515 42
Barges	62	20,472.37
Total	3,600	1,154,870.38

Tonnage built on the lakes during the past five years, according to the report of the United States commissioner of navigation, is as follows:

	No. of boats.	Net Tonnage.
1887	152	56,488.32
1888	222	101,102.87
1889	225	107,080.30
1890	218	108,515.00
1891	204	111,856.45
Total	1,021	485,042.94

St. Mary's Falls and Suez canal traffic: Number of boats through St. Mary's Falls canal in 1890, 234 days of navigation, 10,557; tonnage, net registered, 8,454,435. Number of boats through Suez canal during 1890, full year, 3,389; tonnage, net registered, 6,890,014.

Entered at Cleveland Post Office as Second-class Mail Matter.

IN the very near future the House will give to the committee on commerce a day for the consideration of reports from that committee, and one of the most important measures to be presented is the Vilas bill, which aims to secure statistics of lake commerce. It is understood that as a result of the recent visit to Washington of Mr. C. H. Keep of the Lake Carriers' Association, this bill, which provides that all lake vessels shall report every time they enter or leave port, whether taking on or discharging cargo or entering and leaving light, and which was passed by the Senate and reported favorably to the House by the committee on commerce,, will be again taken up by the House committee on commerce and amended so that package freight lines may, on application to the secretary of the treasury, be exempted from its provisions, in as much as it will not be necessary for them to make reports of their business at different ports around the lakes until the close of navigation. The amended bill also provides for the issuance of blanks by collectors of customs to all vessel masters for the purpose of making the required reports. These blanks will contain the names of the principal items of merchandise, so that at the close of the season the movement of grain, flour, coal, etc., can be compiled in a uniform way. If this bill is passed it will be an improvement on the present law, which is of no benefit whatever in the collection of statistics, but we still hold that the system proposed by leading Cleveland vessel owners through the REVIEW two years ago would result in a more practical benefit all around. The plan is that of having collectors of customs in lake districts furnish to the vessels blanks upon which reports should be made monthly. The collector would simply see that every boat registered within his district made this report, and then forward the entire collection of reports to the statistical bureau of the treasury department in Washington, where a slight increase in the clerical force would be all that would be necessary to secure complete statistics regarding the water commerce of every port on the lakes.

LATE advises from Ottawa are to the effect that the bill providing for reciprocity in wrecking privileges between the United States and Canada had passed its second reading in Parliament and would reach its final passage this week. All that remains now is for President Harrison to sign a similar measure, which has awaited in this country the present action of the Canadian government. This will be done without delay, and to the credit of both nations it can now be said that during the present season the vessel owners of the lakes will see the removal of most unfair regulations that have hampered the saving of life and property.

ONE of the best features of the river and harbor bill, reported to the House on Saturday last, is the absence in the bill of any provisions for surveys on new projects. The last river and harbor bill as reported by the committee contained ninety-three such items,but the engineers advised the present committee that unless a halt was called in this class of legislation the country would soon be swamped with unfinished projects. The aim is to finish up in all parts of the country work now on hand and reduce the new projects to the lowest possible degree. It is a good policy.

UNLESS there is a radical change in weather conditions Buffalo will have received 10,000,000 bushels of grain about May 1. About 6,000,000 bushels has now started down the lakes from Chicago, and of this Buffalo will get 90 per cent., while 3,000,000 bushels more will leave Duluth and Superior a week or ten days hence. Toledo and Detroit shipments toward the seaboard will also contribute to the movement, the like of which has never before been heard of in the world.

THE commission of government engineers appointed to consider the application for a bridge across the canal entrance to Duluth has rightfully reported against the scheme. An urgent need of more dock room would alone justify the demand from Duluth for a bridge across the canal, as against the great disadvantages to navigation presented in this proposition, but the bay within the canal entrance affords ample dock space for years to come.

Bilge Keels.

Some time ago William W. Bates, ex-commissioner of navigation, said in a letter to the REVIEW: "Bilge keels were patented in this country by John W. Griffiths more than twenty-five years ago and applied by him in the steam sloop of war Enterprise about 1873."

In a recent number of the American Shipbuilder, Mr. W. H. Webb, the eminent ex-shipbuilder, comments on this statement as follows: "Mr. Bates is high authority on such matters, but I am of the opinion that bilge keels were employed in Europe before Mr. Griffiths was born. The application of bilge keels to prevent heavy rolling has been resorted to both here and abroad, but in my judgment with very little benefit or success. The fitting of bilge keels to the bilges of vessels to prevent their rolling at sea is about equivalent to the fastening of two pipe stems on the back of a man to prevent his rolling when swimming. The model and proportions of the vessel, unless unduly overloaded at top, control her movements, and if these are faulty, any number of keels will not measurably correct these faults."

Lake shipbuilders are constantly on the alert for new forms of craft that will combine economy in running expense, great carrying capacity and fair speed. They have met with much success in this direction, and it is quite probable that our coast shipbuilders may have to look to their fresh water brethren for new models in shipbuilding.—Maritime Register, New York.

The editor of the MARINE REVIEW has examined Patterson's Nautical Dictionary thoroughly, and with pleasure recommends it to any one having any connection with marine affairs.

Around the Lakes.

Capt. Benjamin Yocum died at Duluth last week. He was an old resident of that port and was engaged in marine work.

The Senate has passed a bill to extend to Marquette the privilege of immediate transportation of unappraised merchandise.

Capt. Laframbois is endeavoring to secure the machinery from the sunken hull of the big wrecking tug Leviathan, which was burned at Cheboygan last fall.

As a matter of record the steamer City of Paris can be put down as the first boat through the straits this season, having made the passage down at 3:30 p. m., April 10.

Capt. H. W. Williams is building at South Haven a passenger boat for World's Fair traffic. She will be 175 feet over all, 31 feet wide, will draw 9 feet of water and will cost $75,000.

Capt. James Davidson of West Bay City, has laid the keel for another tow barge for the Davidson Transportation Company. She will be 210 feet keel, 35 feet beam and 18 feet hold.

The treasury department has honored Capt. Edward D. Ballentine, last season in the Elfin-Mere, with a silver medal in recognition of his services in rescuing the crew of the propeller Oswegatchie on Lake Huron last fall.

The Chicago underwriters have fixed grain cargo rates as follows: To Lake Michigan ports, 30 cents; Lake Superior, 60 cents; Port Huron, Sarnia and Detroit river, 40 cents; Georgian Bay, 50 cents; Buffalo and Lake Erie, 50 cents; Lake Ontario, 60 cents; Ogdensburg, 65 cents; Montreal, 75 cents.

An association of lake stewards has been formed at Buffalo with sixty-five charter members. The officers are: T. Hogue, president; C. Patchen, vice-president; B. Crangle, second vice-president; H. Heritage, recording secretary; J. Nord, financial secretary and treasurer; J. V. Lee, conductor. The trustees are J. V. Lee, B. Crangle and C. Osborn.

The Huron Transportation Company, of which H. B. Loud & Sons of Oscoda are the visible head, has chartered the propeller George L. Colwell and consort D. P. Dobbins for the season and they, with the barge Montgomery, will make a tow. The barges Church and American Giant have also been bought and a steamer will be picked up to tow them. Their exact route has not been made up, but they will carry the company's lumber, along with as much outside lumber as they can.

George C. Baker of Chicago, who has put a large amount of money into a submarine boat of peculiar design, which was built for him by the Detroit Boat Works, gave the craft a trial at Detroit last week. The boat, which has steam power for surface work and an electrical storage battery for propulsion under water, is said to have attained a speed of over 10 miles an hour when submerged. Mr. Baker, who was in the barbed wire business at Chicago, has give up active connections in that regard in order to look after his invention. He will try to interest the government in his boat.

All bids for the exclusive privilege of carrying passengers by lake between the city and Jackson park during the World's Columbian Exposition, have been rejected by the subcommittee having the matter in charge. This committee has been studying the bids for two weeks. The reason given out for rejecting those presented was that the bidders calculated the percentage they would give the exposition management from so many different standpoints that it was impossible to tell who was the lowest bidder. New proposals may be invited, or the committee may simply make terms with one of the bidders without further formality.

It would be difficult to find a more unassuming collection of business men than the lakes present in the heads of transportation companies and other leaders in different enterprises connected with the general trade. An explanation is probably found in the fact that to a large extent these men are self-made, and owe their prosperity to a most pleasing disposition in the conduct of business. Capt. David Vance of Milwaukee, who is at the head of the insurance agency bearing his name, and Mr. Stanley B. Smith of Detroit, who operates the Detroit river coal docks, are among this class of lake men. Both were in Cleveland during the week.

H. W. and John D. Baker of Detroit, who released the schooner Gleniffer from the beach on the Canadian side of Lake Ontario last season with marked success, a few days ago brought the schooner David Stewart to Cleveland, after having been even more fortunate in removing her from a berth on the shore near Geneva, O., where she had lain all winter. A costly effort last fall to release the Stewart was unsuccessful, but the Baker brothers floated her this spring before the ice had hardly left the shore and they are understood to have profited by their work as the expense was less than $1,000 and they get $5,000 for delivering the boat in dock.

Wanted to be a Sailor.

M. Quad, whose famous writings on the Detroit Free Press extend back to about the close of the late war, has many times written very interestingly on subjects pertaining to the lakes in the days when seamen were required to handle trim schooners and sailing vessels of all kinds. The Free Press was the first lake newspaper to report the passage of vessels in the Straits and at points along the rivers and was then a favorite journal among lake-faring men. Among M. Quad's amusing writings during that period is the following found recently in a scrap book kept by Capt. Peter Minch of Cleveland:

"Seth G. of Virginia writes: 'I have determined to be a sailor on the lakes. I am fifteen years old, and I want to ask you how much pay sailors receive, and how I can get to be one?'

"Exactly my boy. If you have determined to become a fresh or salt water sailor the best thing that could happen you would be to give you a chance. Your writing is terribly poor, and it is evident that you have no desire for education. It is quite probable, too, that you intend to run away from home. However, come right along. Some dark night about April 1 tie your clothes up in a red handkerchief, let yourself down on the roof of the woodshed, and drop to the ground with a good-bye to the old home. You can walk to Cleveland, Toledo or Detroit in about four weeks, and by living on bones and crusts and sleeping under straw stacks and fence corners you will get toughened up to the sailor business quite a little. When you reach one of the lake ports named, just walk down to the wharves and say to the first captain you meet:

" 'Say, captain, I've run away from home to become a sailor. I want to plow the raging main on your schooner. Will you take me?'

"The chances are that he will. You'll sign articles for the voyage or for a month, and in about three minutes after you have put your name to them the plowing will begin. You'll do more hard work in a day than you have done in a week. It won't take you long to discover that you have a boss. He is called the mate, and it won't make any difference to him whether he hits you with his fists or uses the end of a rope to tickle your back. You will be the drudge and the dog for the ship, and any hesitation about obeying an order will bring you a kick or a cuff. You probably imagine yourself wearing a sailor's hat, silk necktie and flowing pants, and you dream of loafing around and listening to yarns from old Bill, the pirate. Just wait my boy. Your pants will flow with holes and patches, old Bill won't be on that ship, and when the mate catches you loafing around he'll stir you up till you think of bumble-bees.

"The fare may possibly be as good as you get at home, while the pay of a veteran sailor is about the same as a veteran ditch digger. It's all right to read about the 'heaving sea' in poetry but when the heaving ship heaves, a boy about your age will wish for his bed in the chamber of the old Virginia homestead. You may see the sun rise out of or sink in the lake, but you'll have tar on your hands, an ache in your back, and the mate close behind you. You'll see gulls, but the smells of the dark forecastle will make you forget the gull question pretty suddenly. Maybe they'll let you have a hammock, but after you are called out of it at midnight to go aloft in a gale and hang on with toes and eyelids the romance will disappear. How do I know? Didn't I try it once upon a time? Yes, I did, and it didn't take two days to convince me that 'plowing the raging main' was the hardest plowing any human being ever tried. If I hadn't sailed I should want to be a sailor. Nothing will do for you but to try it. Make your arrangements, therefore, and if you are not drowned on the first voyage, and can find your way back to Virginia, you'll return home and be willing to turn the grindstone all day long."

The Proposed General Organization.

Friday of this week has been fixed as the date for the meeting in Detroit of representatives of the different organizations of vessel owners around the lakes, with a view to forming one general association. Secretary Keep of the Lake Carrier's Association was in Cleveland Wednesday and attended a meeting of the Cleveland association, at which Messrs. Goulder, Bradley, Corrigan and Hawgood agreed to attend the Detroit meeting. These gentlemen will probably be accompanied by other Cleveland owners, and it is expected that representatives from Chicago and Milwaukee will also be in attendance. The numerous labor troubles around the lakes will probably add interest to the meeting, as most vessel owners feel that the action of branches of the Knights of Labor in Chicago and elsewhere will require even a more vigorous policy than was needed in dealing with the Seamens' Union.

Value of Organization.

It would have cost the owners of passenger boats on the lakes $40,000, at a low estimate, to equip their boats with the guns and line carrying projectiles proposed in the law just repealed, as far as it refers to the lakes, through the efforts of the Lake Carrier's Association. The vessel interests of the coast have no organization, and the law undoubtedly places an unnecessary burden upon many of them. But the actual saving of $40,000 through defeat of this obnoxious measure is not the only benefit derived in this case. Freight steamers would in all probability be forced to also purchase the guns and rockets, as a careful reading of the law will show that it might be construed to apply to all steam vessels, and, better than all, the manufactures of useless devices of this kind, who are continually trying to secure the enactment of legislation favorable to their personal interests, have been taught a lesson that will have its results in the future.

Modern Lighting Plants for Lake Steamers.

Mr. Samuel Mather of Cleveland has awarded the contract for placing a complete incandescent and arc lighting plant on the new whaleback steamer Pathfinder, building at West Superior to the Fisher Electric Company of Detroit, and the extent to which this company has been making contracts for electrical plants of late will tend to show the demand for the best equipment in all lines on modern lake steamers. This boat will be equipped with two arc lamps for external illumination and the main hold will be thoroughly lighted by incandescent lamps of large candle power. Particular attention will be given to the lighting of the engine room, which in whaleback steamers is rather dark. The state rooms on the steamer will also be thoroughly lighted together with the crew's quarters. The boat will be equipped with automatic signal lamps and the current will be furnished by a 225-light automatic Fisher dynamo. The steamer is wired throughout with the core wire of this company.

The Fisher company has also been awarded a contract by William G. Mather of the Cleveland-Cliffs Iron Company, for placing a lighting plant on the steel steamer Pioneer, building at the Wyandotte yard of the Detroit Dry Dock Company. A direct-connected dynamo and a vertical engine will be installed on this steamer. This boat will also be equipped with arc lights for external illumination, and the crew's quarters, engine room and other departments will be thoroughly lighted by incandescent lamps. An automatic signal outfit is also included. The current will be furnished by a 150-light dynamo, which will also supply the current for the arc lamps.

The wiring on Col. Reynolds' yacht Sigma by the same company has been completed. The lighting plant is in accordance with recent naval specifications, including a direct-connected dynamo, signal lamps and a ten circuit switch-board. Fixtures of special design will be used throughout the yacht and in the main cabin and state rooms they will be very elegant. The new mahogany deck house will have a large number of masked bulls-eyes and the main decks forward and aft will be provided with suitable lamps for decorative illumination. At night the Sigma will present a beautiful sight.

In General.

Life saving stations on Lakes Erie and Ontario have been ordered open on April 20.

The steamer Sitka on her trip down from Chicago was drawing 15 feet 2 inches. She got over Grosse point channel without delay but scraped bottom several times.

David Bell of Buffalo issues a neat catalogue describing his steam hammers and containing a picture of the Merchant, the first iron propeller built on the lakes, which was built by him. Send a stamp to him and receive one.

Iroquois is the name of a steamer, 240 feet keel, 41 feet beam and 21 feet deep, launched by M. P. Lester at Curtis & Brainard's ship yard, Marine City, Tuesday. She has a compound engine, built by the Phoenix Iron Works of Port Huron.

In the report of the Canadian marine department just issued it is announced that with the opening of the present season two iron skeleton towers will be erected on the head of Bois Blanc island, Detroit river, to assist vessels in making the channel at that point. The report also announces that two horns and machines and two boilers complete are now near the fog station at the east end of Long point, Lake Erie, ready to be set up.

Collectors of customs in some lake districts are instructing all owners and masters of steam vessels as well as sail vessels to have names placed on the bows, notwithstanding that the treasury department, through circulars eminating from the bureau of navigation, steamboat inspection service and law department, has contradicted itself as regards this requirement on steamers. Owners of steam vessels will probably save themselves annoyance by having names so marked.

Recent sales of vessel property: Steamers—Landgell Boys, Langell & Sons of St. Clair to N. B. Bradley and others, $45,000; S. Neff, Cleveland Sand and Gravel Company to J. S. Gray of Detroit, $7,500; Chief Justice Waite, Lake Michigan steamboat company to Warde Transportation Company of Chicago, private terms. Schooners—Lizzie A. Law, Robert Law of Chicago to John Warde of Chicago, $25,000; Michigan, F. W. Gilchrist of Alpena to Edward Corning of Chicago, $30,000; R. B. Hayes, William Griffin of Morristown to J. C. Gilchrist of Cleveland, $15,000.

Liability for Injury to Seamen

In the United States district court, New York, a short time ago, Judge Brown passed upon a case in which a seaman claimed damages for injuries sustained by falling to the deck from a triangle while scraping the mainmast of the schooner Julia Fowler. The evidence showed that the rope, which broke, was old and spliced and that the attention of the mate, who rigged the triangle and was in charge of the work, had been called to its character before the accident. It also appeared that all the men considered the rope of doubtful sufficiency, but that they continued the work without objection, without demanding a new rope, and there was no evidence to show a new one would not have been furnished them had they asked for it. The court held that this was an acquiescence in the wrongful act of the mate, charging libelant also with negligence. An award of $400 was made for damages.

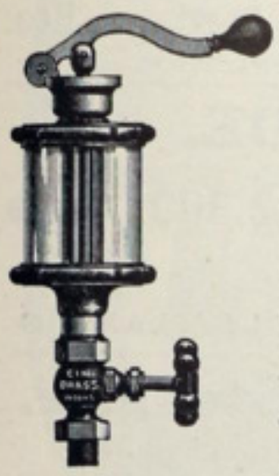
A similar case was decided by Judge Morris, Maryland. A stevedore lost his right hand by its being caught between the cogs of a steam-winch, which the court found to be dangerous and unsafe because of the nearness of the steam valve to the cogs, and of the absence of casing over the cogs to prevent such accidents. The stevedore knew the dangerous condition of the winch and spoke of it to the mate of the vessel, but continued during part of two days to work the winch. The court held that this action was evidence of contributory negligence on the part of the stevedore, but the negligence being neither wilful, gross nor inexcusable, and the facts presenting a strong case for his relief, he should be decreed one-half the sum which he would have recovered if he had been without fault.

Low rates to the west can always be obtained upon application to agents of the Nickel Plate. The company will run a special train to Chicago on April 26, for the accommodation of excursion parties which have been secured by their agents for that date. Apr. 22

Vulcanized fibre valves are in use on over 1,000 ocean steamers and probably fifty lake steamers. Their advantage over others is that immersion in hot or cold gives them additional flexibility. Bingham & Co. are Cleveland agents.

Glass Body Oil Pump.

The accompanying illustration shows one of Lunkenheimer's glass body oil pumps. It is intended as an auxiliary to the sight feed lubricator, and is, in fact, so necessary that no engine should be without it. With this pump any amount of oil can be supplied to the cylinder at any time.



Its advantages can readily be seen when starting up the engine, or in case an accident happens to the sight feed lubricator in the breaking of a glass tube. Such an accident would cause great annoyance, but all this can be obviated by having one of Lunkenheimer's glass body oil pumps on the steam chest or cylinder. The pumps are simple and practical in construction, durable, efficient and very ornamental. They have been adopted by leading engine builders in the United States, and are highly endorsed by them and thousands of other users. They are strictly first class and warranted; made in two sizes, holding one-third and one pint respectively, and can be furnished highly finished either in brass or nickel plated form. The glass body shows the amount of oil. This useful article can be supplied by any dealer in brass goods or by the Lunkenheimer Brass Manufacturing Company of Cincinnati, O., U. S. A. This company's 1892 catalogue of superior steam specialties will interest you. Write for one.

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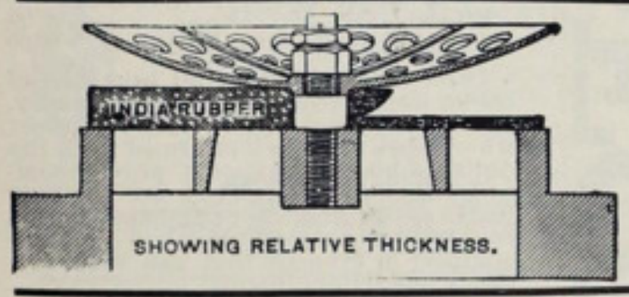

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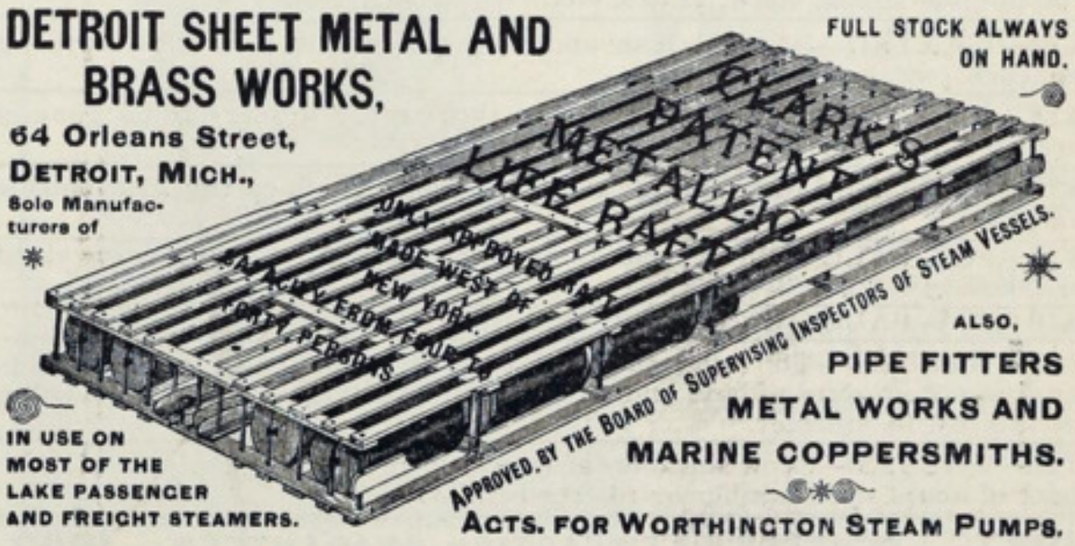

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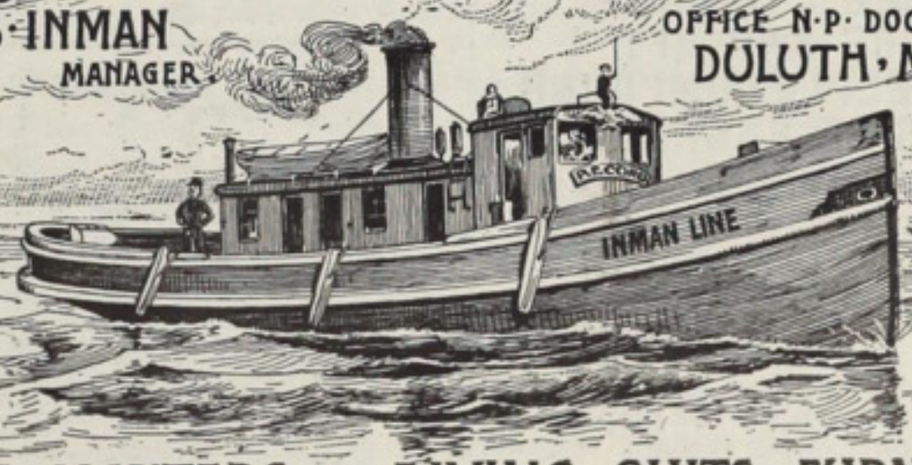

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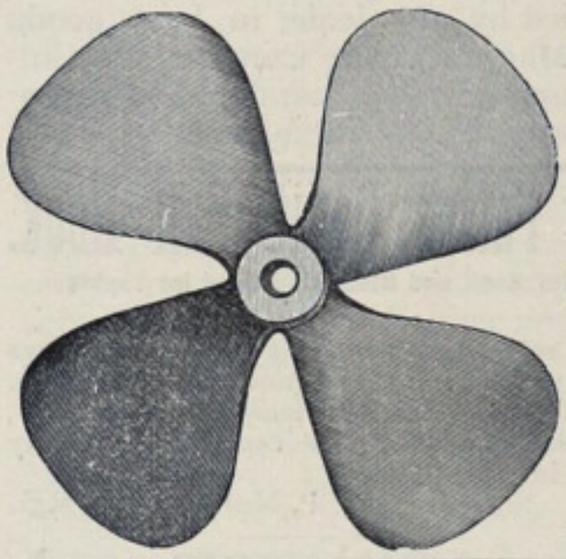

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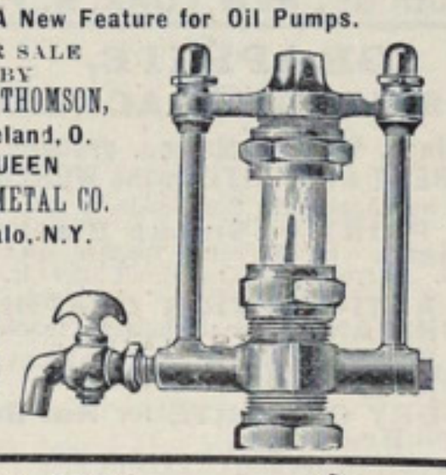

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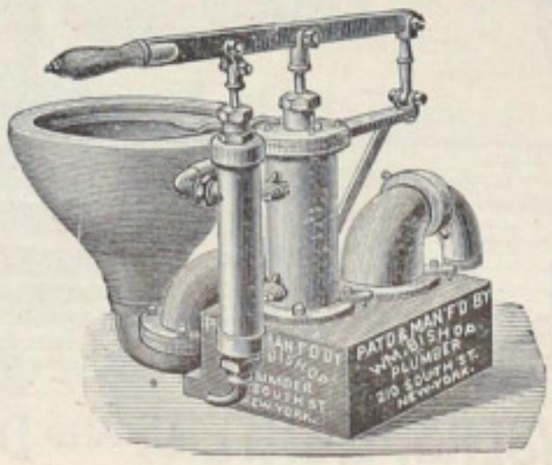

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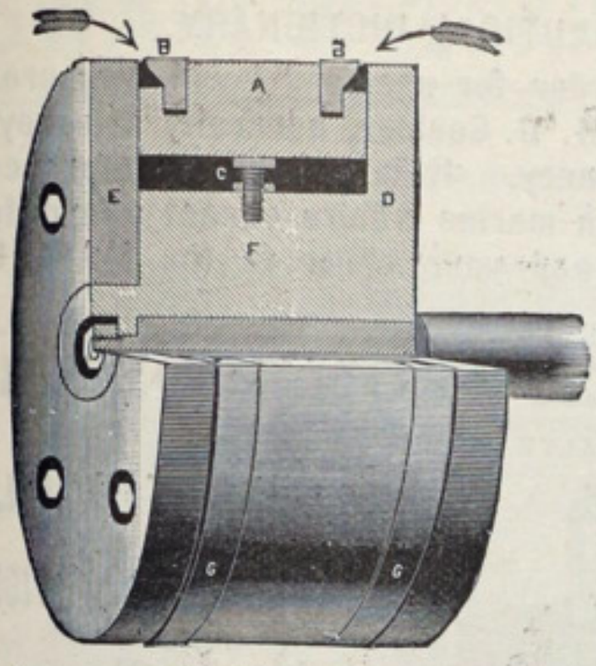

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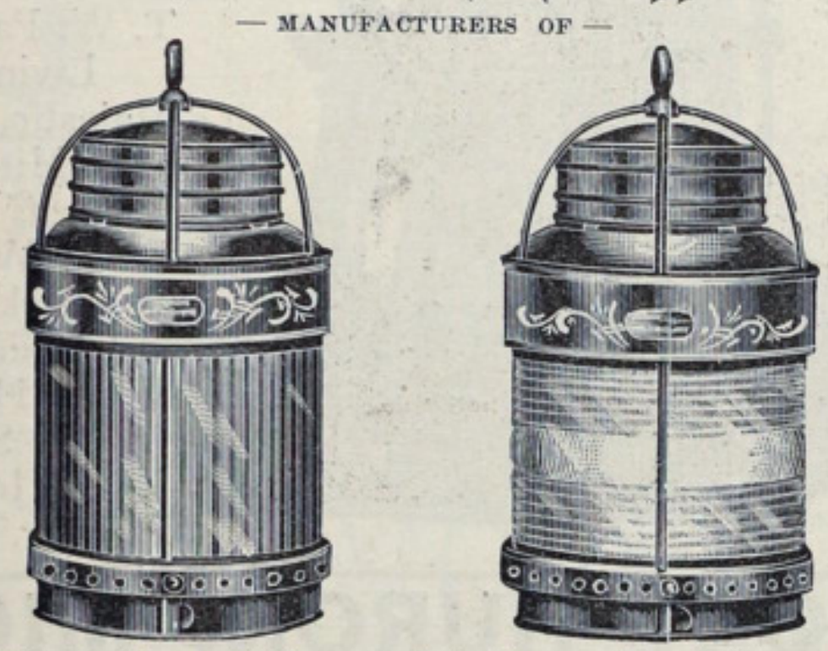

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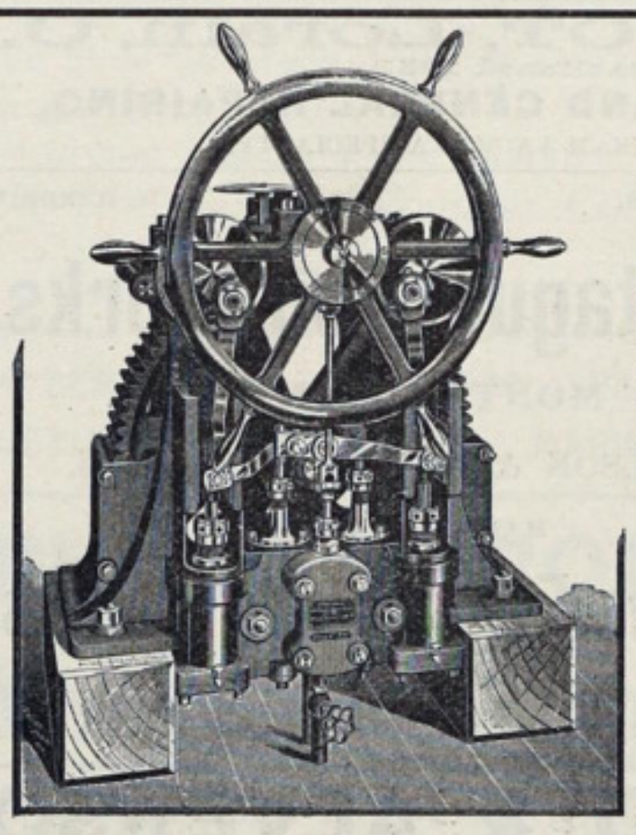

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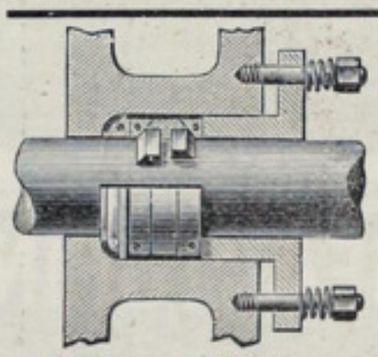

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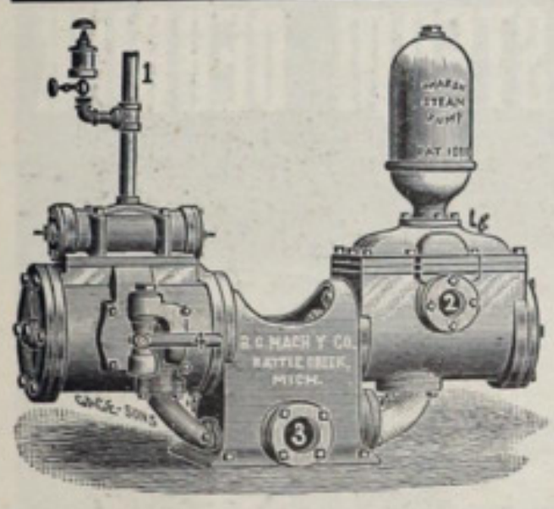

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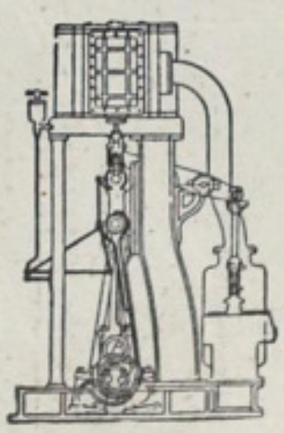

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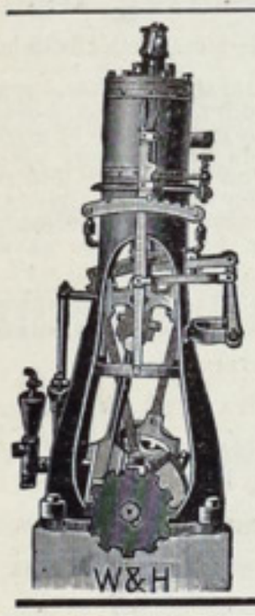

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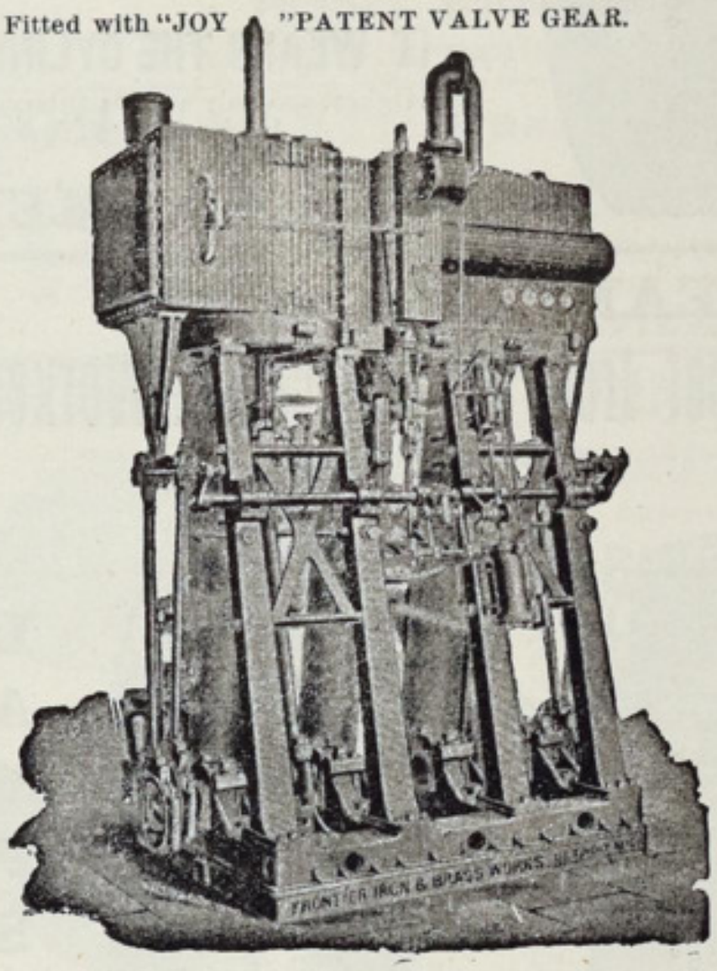

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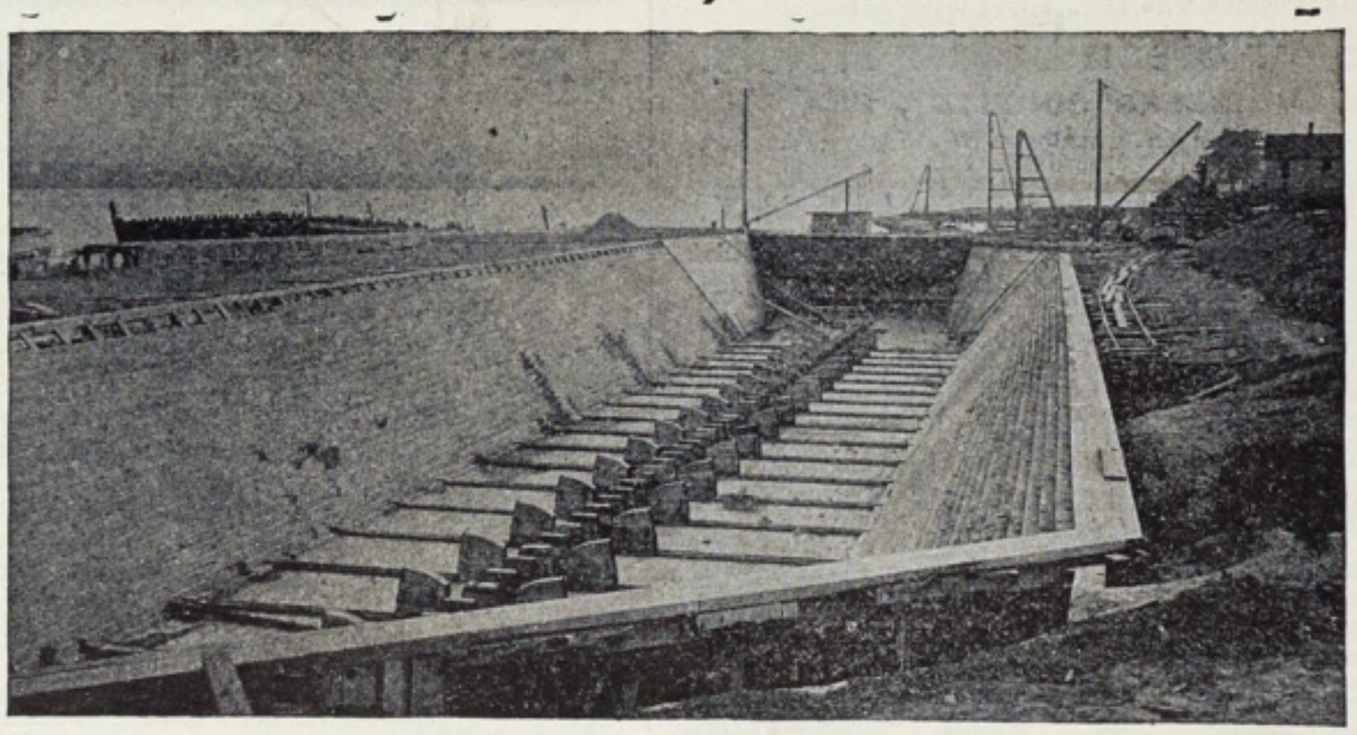

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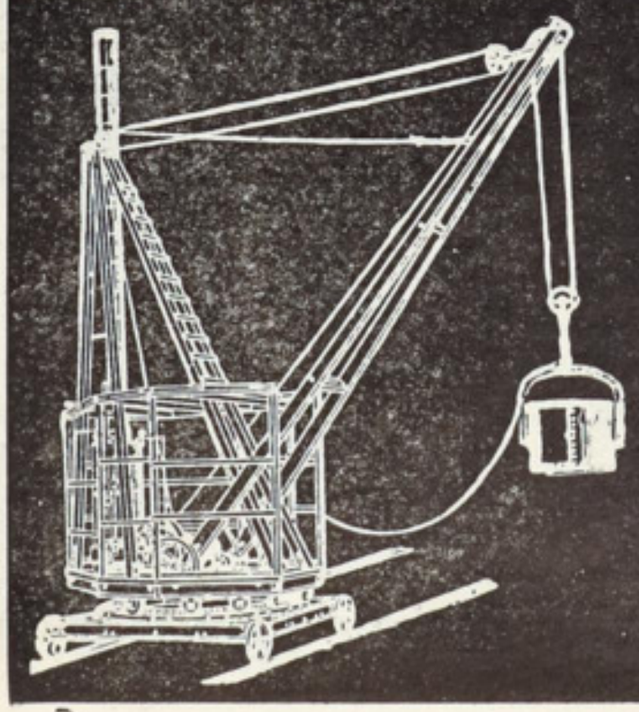

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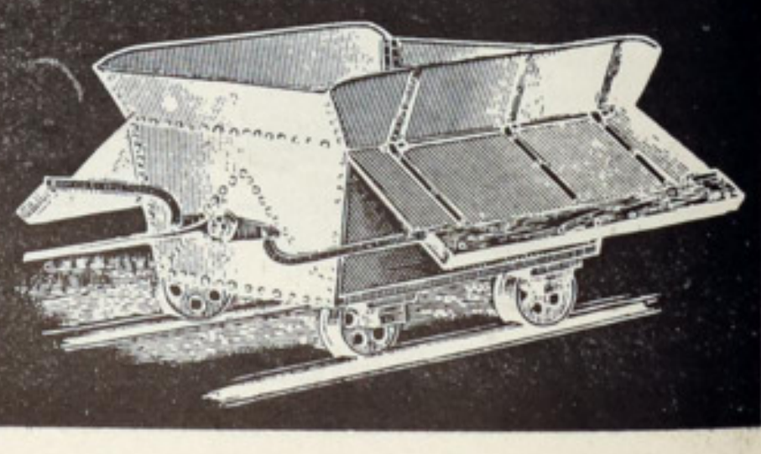

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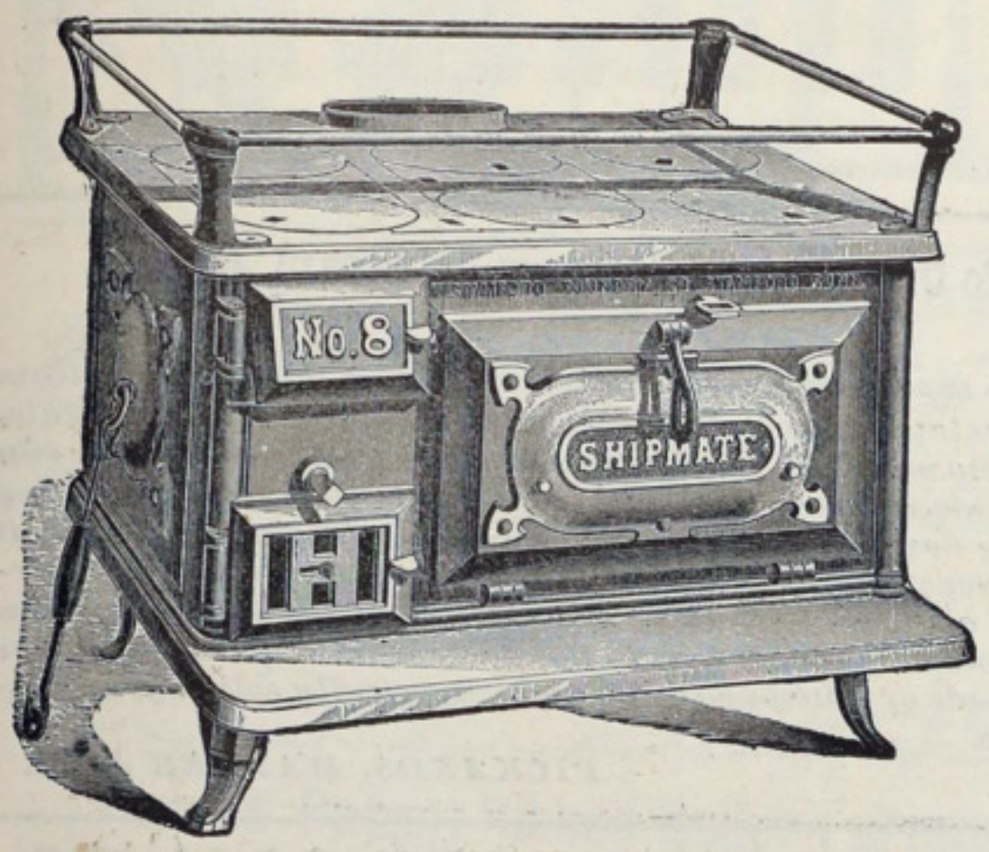

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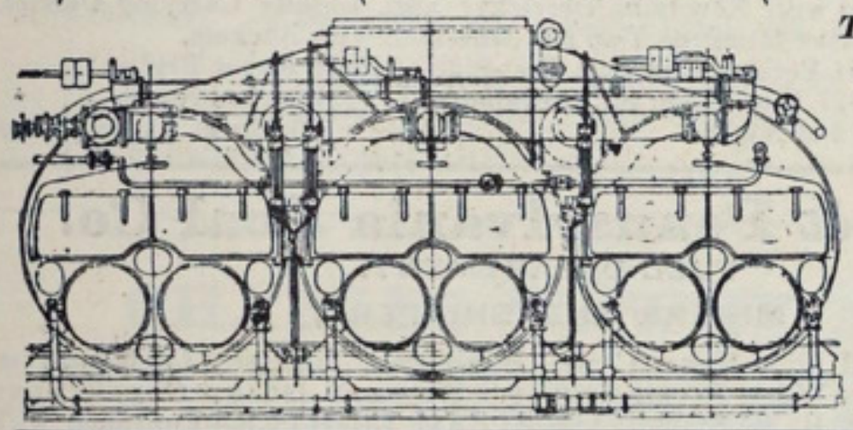

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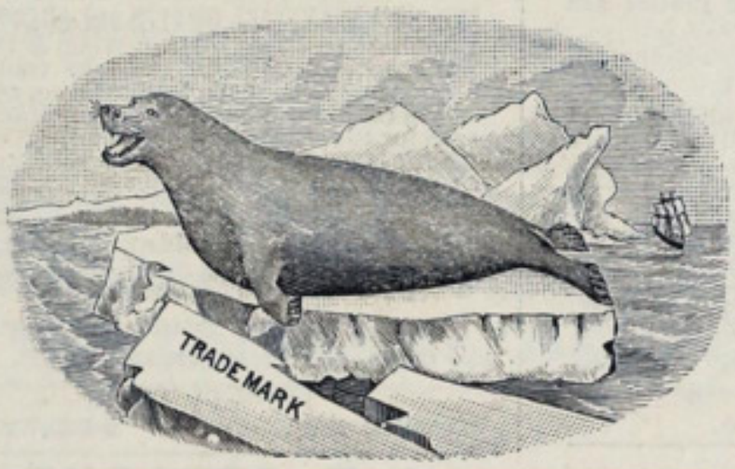

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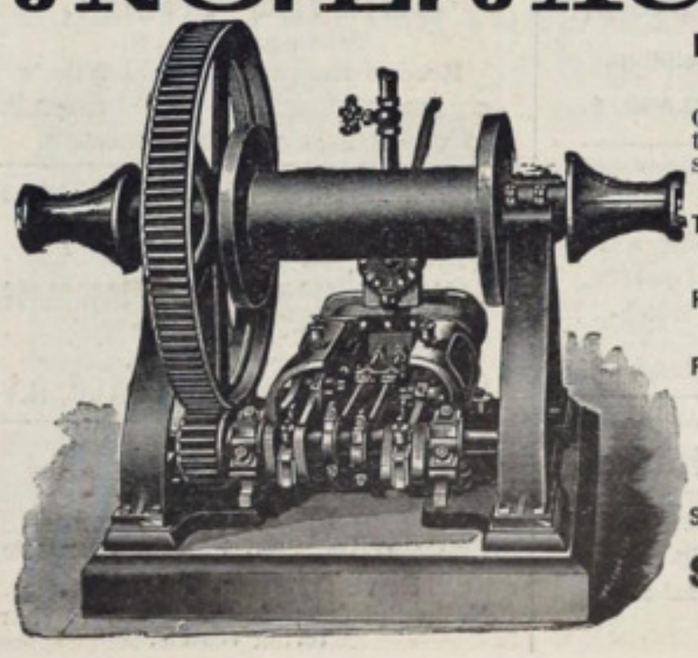

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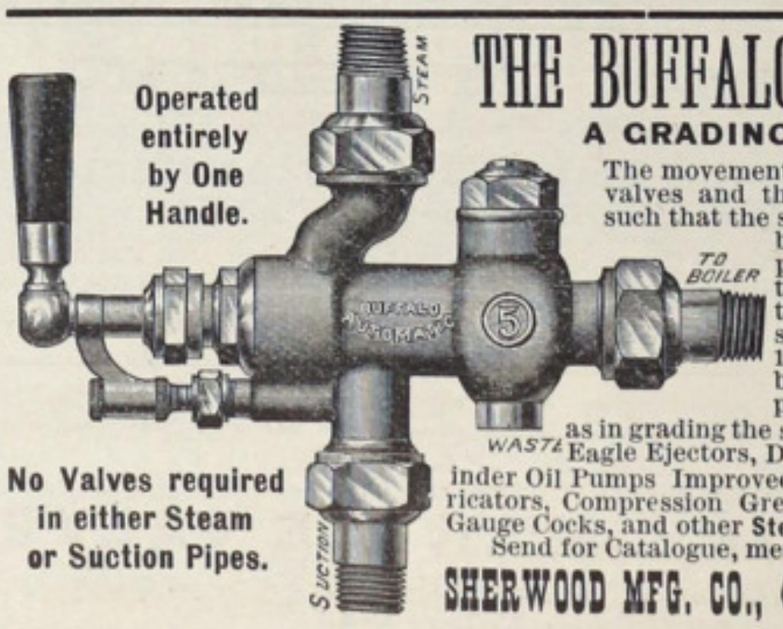

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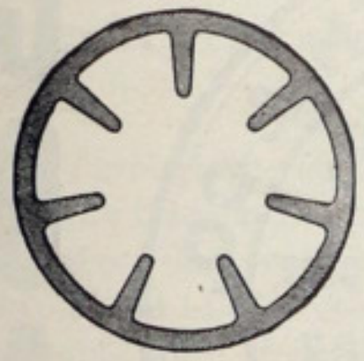

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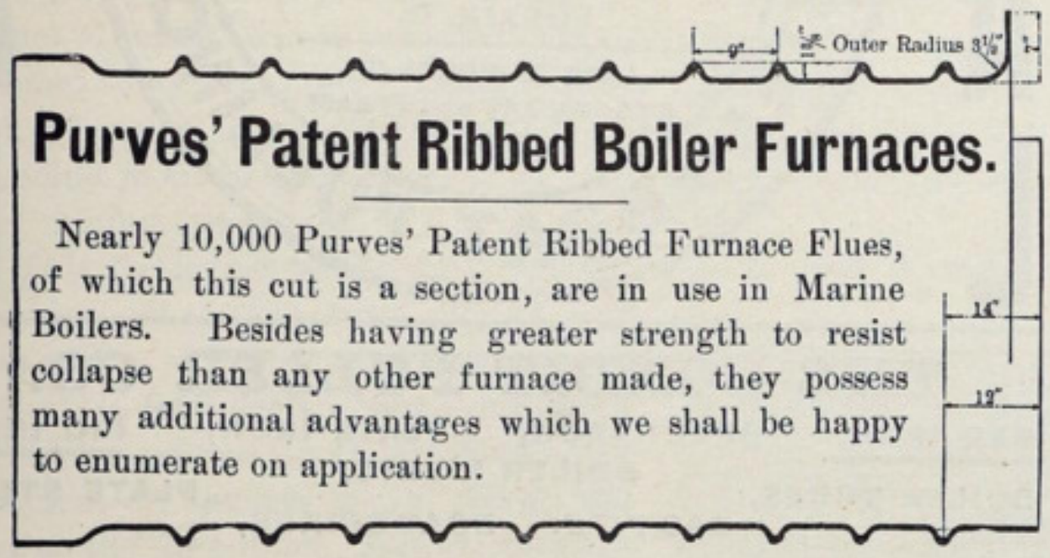

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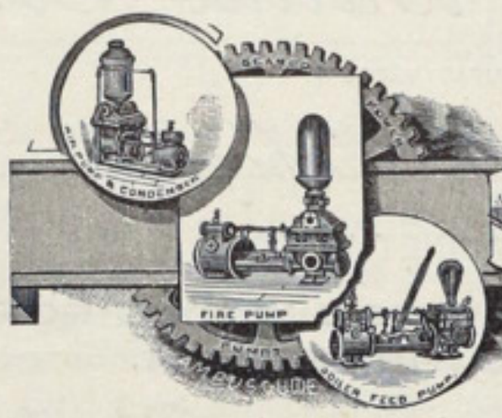

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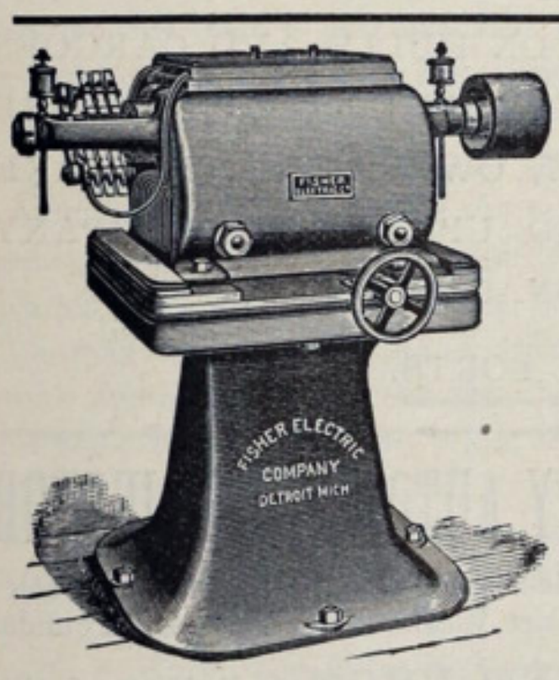

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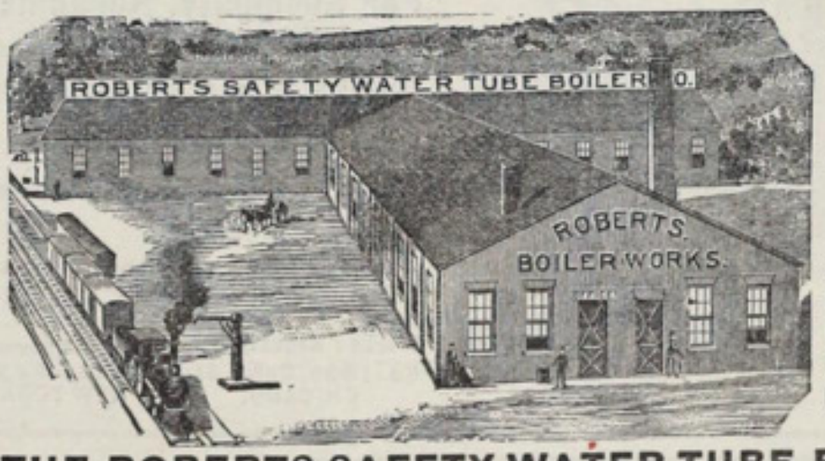

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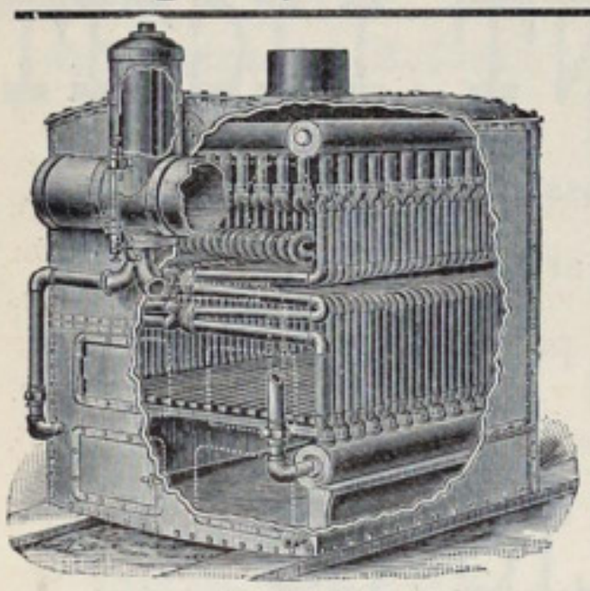

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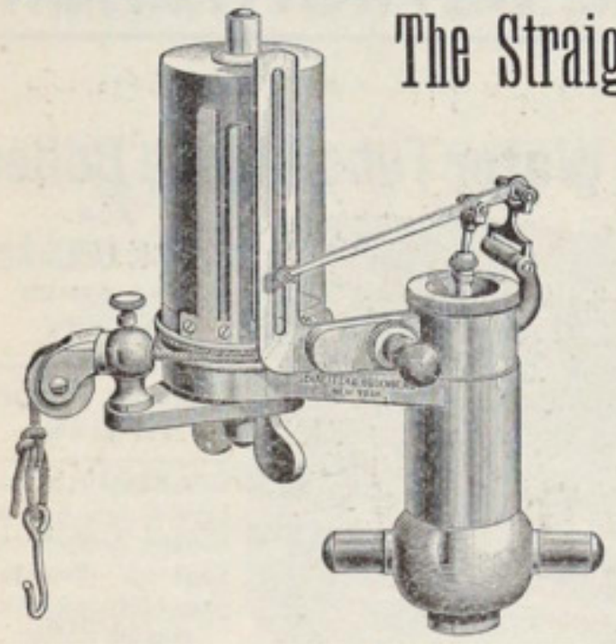

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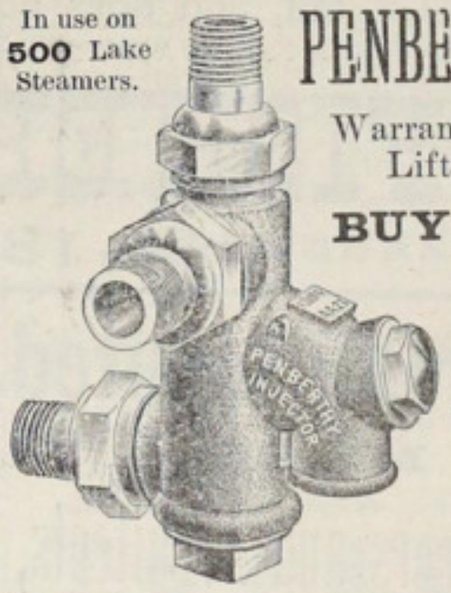

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